

ABSTRACT

A non-aqueous electrolyte secondary battery including: a positive electrode including a positive electrode material mixture layer; a negative electrode including a negative electrode material mixture layer; a separator or lithium-ion conductive porous film interposed between the positive electrode and the negative electrode; and a lithium-ion conductive non-aqueous electrolyte. The positive electrode material mixture layer contains a positive electrode active material comprising a lithium transition metal composite oxide, and the lithium transition metal composite oxide contains lithium, a transition metal, and a metal different from the transition metal. The negative electrode material mixture layer contains a negative electrode active material comprising a carbon material. In the area where the positive electrode material mixture layer and the negative electrode material mixture layer are opposed to each other, the ratio $R:W_p/W_n$ is 1.3 to 2.2 where W_p is the weight of the positive electrode active material contained in the positive electrode material mixture layer per unit opposed area and W_n is the weight of the negative electrode active material contained in the negative electrode material mixture layer per unit opposed area. The end of charge voltage is set to 4.25 to 4.5 V in normal operation.